

CATRAC Cable & Hose Carrier Products

Ordering Guide & Technical Information









CATRAC[®] is used on various types of machinery as a means of safely and efficiently conveying power, electrical, air, or fluid (or a combination of these) to equipment in motion. CATRAC is designed to be maintenance free and to protect cables and hoses from abrasion, wear and twisting. A wide variety of options are available.

The center pivot design allows for smoother cycling and minimal hose movement. The CATRAC design offers "No Pinch Points" to insure operator safety. Standard side links are high tensile steel for maximum strength. Steel CATRACs are zinc plated with a yellow dichromate dip for superior corrosion resistance. Optional materials, such as aluminum and stainless steel are available.

We also offer a line of Mill Duty CATRACs that are used in rugged applications and environments such as steel mills. These CATRACs offer a box beam type carrier for maximum strength and stability. Spring loaded rods offer the customer easy access to cables and hoses. They also eliminate the concern of fitting sizes that must pass through the (fixed) compartment opening on a box beam style carrier. Hardened shoulder bolts and locknuts (referred to as bolted construction) are recommended for use in rugged environments. The CATRAC is manufactured so that pieces or sections can be removed or replaced in the field.

Our CATRAC product offers: a variety of sizes from 2.00" to 14.00" high links, carrier options from welded carriers,

split aluminum bar carriers, rod carriers, removable pipe, spring loaded rods, vertical pins, double deck, custom radius "M" dimension (including double radius), custom and special widths, including single widths, double widths, triple widths, etc.. We offer various support systems from a single stationary roller support to a complete CATRAC carriage support system.

We can provide you with the optimum system to suit your needs either with our standard carriers and options or by means of a custom designed system to meet your specific requirements. In addition to our standard systems used in a standard linear motion, we can also provide you with double radius side mounted systems. Contact our applications engineers for additional information or to discuss your needs in detail.

Get on the right track with CATRAC cable & hose carriers.



CATRAC® Features

- No pinch points
- Center pivot design for minimal cable and hose wear
- Wide variety of standard carrier designs
- Available in any radius or width
- Custom designs available to optimize your system
- Superior finish and corrosion resistance
- JIT programs
- Short lead times
- Designed and manufactured in the USA

Mounting Variations







CATRAC Selection Guide

Which CATRAC is right?

- 1. Determine the outside diameter of the largest cable or hose to be carried.
- Determine total machine travel. Unsupported length of CATRAC[®] on horizontal applications is total travel ÷ 2 when no supports are used and the stationary mounting foot is placed at the center line of travel.
- 3. Determine total weight to be carried per foot.
- Use the charts to select the proper CATRAC style for your application. Please note that hose area varies with type of carriers used.
- Determine the rolling radius of the CATRAC by:
 A) Minimum bend radius of cable or hose recommended by the manufacturer. If this is not available, we recommend a minimum of 6 times the O.D. of the largest cable or hose.

B) Space limitations. The "M" dimension of the CATRAC must be less than the available space where track will be installed. The rolling radii shown in the dimension pages are standard. Special radii and "M" dimensions are available to suit your application at no additional cost.

- 6. Determine CATRAC "X" or inside width. Add the O.D. of all cables and hoses. Allow a minimum of 0.12" between each hose or cable and on both sides of the CATRAC. If vertical separators or hose straps are used, additional clearance is required.
- 7. Determine the length of the CATRAC. If the mounting foot is placed on the center line of travel as shown on the dimension pages, CATRAC Length = "RL" (radial length) + 1/2 of total travel (T/2). If the mounting foot is placed on either side of center line, the distance from the center line to the mounting foot (Y) must be added.
- 8. Determine mounting feet requirements and positioning on the CATRAC assembly.

If you need assistance or have any questions on special applications, feel free to contact our application engineers.





	Max. Hose or Cable Clearance		
Style	RP/RC, SL WC, AB		
203	1.10 1.25		
304	1.93	2.00	
375	2.67	2.75	
456	3.14	3.50	
606	4.37 4.50		
808	6.00	6.50	
2CP	1.18, 1.20	1.25	
3CP	1.90 2.00		
Consult manufacturer for special carrier designs.			

The charts below give conservative estimates of cable and hose O.D. and weight and should be used for quick reference only. Diameters and weights will vary and should be verified with manufacturer.

General Purpose Hose					
Hose Size I.D x O.D.	Braid	Max. PSI	Hose Weight Lbs/Ft	Liquid Weight Lbs/Ft	
1/4 x 18/32	2	300	.18	.03	
3/8 x 22/32	2	250	.23	.05	
1/2 x 22/32	2	250	.29	.09	
3/4 x 1 7/32	2	225	.46	.16	
1 x 1 1/2	2	225	.64	.34	
1 1/4 x 1 25/32	2	225	.70	.53	
1 1/2 x 2 1/32	2	225	.80	.77	

Small Cable					
16 AWG		14 AWG			
No. Cond.	Dia. in in/mm	Weight lb/ft kg/m	No. Cond.	Dia. in in/mm	Weight lb/ft kg/m
2	0.41/10.4	.091/0.14	2	0.53/13.5	.151/0.22
3	0.43/10.9	.112/0.17	3	0.56/14.2	.186/0.26
4	0.49/12.5	.150/0.22	4	0.61/15.5	.221/0.33
5	0.53/13.5	.168/0.25	5	0.62/15.8	.288/0.43
6	0.57/14.5	.195/0.29	6	0.74/18.8	.332/0.49
7	0.61/15.5	.222/0.33	7	0.80/20.3	.362/0.54
8	0.65/16.5	.243/0.36	8	0.85/21.6	.407/0.61
10	0.72/18.3	.306/0.46	10	0.90/22.9	.477/0.71
12	0.74/18.8	.343/0.50	12	0.93/33.6	.529/0.79
16	0.83/21.1	.425/0.63	16	1.08/27.4	.723/1.08
20	0.90/22.9	.512/0.76	20	1.18/30.0	.865/1.29
24	1.02/25.9	.630/0.94	24	1.29/32.8	1.01/1.50
30	1.07/27.2	.745/1.11	30	1.40/35.6	1.25/1.86
36	1.16/29.5	.888/1.32	36	1.51/38.4	1.47/2.19
	12 AWG			10 AWG	
No. Cond.	Dia. in in/mm	Weight lb/ft kg/m	No. Cond.	Dia. in in/mm	Weight Ib/ft kg/m
2	0.61/16.5	.207/0.31	2	0.65/16.5	.243/0.36
3	0.64/16.3	.253/0.38	3	0.70/17.8	.311/0.46
4	0.67/17.0	.297/0.44	4	0.75/19.1	.385/0.57
5	0.73/18.5	.351/0.52	5	0.82/20.8	.461/0.69
6	0.80/20.3	.409/0.61	6	0.88/22.4	.532/0.79
7	0.86/21.8	.472/0.70	7	0.98/24.9	.649/0.97
8	0.92/23.4	.519/0.77	8	1.05/26.7	.717/1.07
10	1.02/25.9	.635/0.95	10	1.13/28.7	.838/1.25
12	1.05/26.7	.706/1.05	12	1.16/29.5	.938/1.40
16	1.16/29.5	.921/1.37	16	1.29/32.8	1.23/1.83
20	1.29/32.8	1.10/1.64	20	1.46/37.1	1.55/2.31
24	1.45/36.8	1.35/2.01	24	1.60/40.6	1.81/2.69
30	1 53/38 0	1 60/2 38		1	





RC Rod Carriers

Available on 2CP, 3CP, 203, 375, 304 style tracks, this tubing is used to hold the entire CATRAC[®] together. They are fastened to links with a self tapping screw that can be removed from top or bottom rod to make installation of hose or cable easier.







The carrier is widely used in very rugged applications. It can withstand severe hydraulic shock and has no loose parts which can be lost during installation of the hose cable. The welded carrier bars alternate position top to bottom on styles 203, 375 and 304. Styles 456, 606 and 808 use a box beam construction with top and bottom beams across from each other for added strength.

RP Removable Pipe (Standard)

This assembly provides easy installation of cable and hose. The pipe can be removed by knocking out a roll pin and pulling it out the side of the CATRAC.

SL Spring Loaded Removable Pipe

This design provides the quickest way to install or change cable and hose in the field. Simply compress the plunger and pull the pipe out. No screws or pins need to be removed and no side space limitations need to be considered.



AB Split Bar Carriers

1/2" wide aluminum or 3/4" wide wood split bar carriers can be provided. This carrier is custom machined to your specifications. Note: Holes must be at least 1/8" larger than cable hose diameter.

VP Vertical Pins

Vertical pins, also referred to as separators or dividers, can be welded into RP, SL and WC style carriers to separate cables or hoses to prevent twisting or overlap.

Extra Heavy Duty (Mill-Duty) Construction

For steel mills and other heavy duty service, the double welded carrier (MD option) is used as well as bolted construction (BC option). This structure has the ultimate strength for a carrier. Box beam construction is standard in the 456, 606, and 808 styles and can withstand severe hydraulic shock loads.

Optional & Special Carrier Designs

Special perforated carriers can be supplied which provide openings for hose straps. The hose straps, if used, should be very loose and used as a hose and cable separator rather than a tie down.

Many carriers and stiffeners are designed in cooperation with our customers. We welcome ideas to fit your specific application needs.







2CP and 3CP CATRAC® Part Number System





2CP

3CP

AB

1.25

2.00

HO HO

2CP and 3CP CATRAC® Part Number System



Normally one (1) pair of mounting feet are used at each end of the CATRAC. Unless specified, flanges are mounted inward on standard CATRAC.







Req'd per

CATRAC

2 Pair

2 Pair

Vertical Mounting Feet









CATRAC[®] 3CP Dimensions







Mill-Duty CATRAC[®] Part Number System







Mill-Duty CATRAC[®] Part Number System



		Removab	le Pipe
	Style	HC	
	203	1.10	PIPE
	304	1.93	
RP	375	2.67	H.C.
	456	3.14	
	606	4.37	
	808	6.00	
	S	plit Aluminum	Bar Carrier
	Style	Max. Hole	
	203	1.25	DIA.
	304	2.00	
АВ	375	2.75	
	456	3.50	
	606	4.50	

6.50

4.37

6.00

606

808

808

Standard Mounting Feet				
CATRAC Style	Horiz. Mount Feet P/N	Vert. Mount Feet P/N	Req'd per CATRAC	
203	РС-0089000-В	PC-0089200-B	2 Pair	
304	РС-0091000-В	PC-0091200-B	2 Pair	
375	РС-0191900-В	РС-0192000-В	2 Pair	
456	РС-0093000-В	PC-0093200-B	2 Pair	
606	PC-0095000-B	PC-0095200-B	4 Pair	
808	PC-0097000-B	PC-0097200-B	4 Pair	

Vertical Mounting Feet







2.00 CLEARANCE REQUIRED ABOVE LINKS Т 1.50 Ζ TOTAL TRAVEL olc φ φ ð C 1.50 3.00 HORIZONTAL VERTICAL 1 MTG. FEET MTG. FEET \bigcirc ľ 75 .38 X .56 MOUNTING T/2 T/2 HALF TRAVEL HALF TRAVEL SLOTS TYPICAL ဖြစ်ပ RADIUS М С OVERALL HEIGHT Δ CENTER LINE В 000 OF TRAVEL x (SEE BELOW) F C (RP) 000 1 00 000 Õ Q 2.00 1.10 REMOVABLE \sim 1 PIPE -.50 1 .38 -1.50 - 3.50 00 00 00 (SL) O SPRING LOADED 1.10 C \cap \cap REMOVABLE PIPE NOTE: 1.25 dia. 1) CATRAC LENGTH MUST BE DIVISIBLE .38 MAXIMUM BY PIN CENTERS. 2) ALL STANDARD CARRIER WIDTHS IN 2" 000 000 000 000 (AB) INCREMENTS 4" THRU 12". SPLIT ALUMINUM 3) FOR MULTIPLE OR SPECIAL WIDTHS, BAR CARRIER CONSULT FACTORY. .38 .25 .38 4) ALL PARTS ZINC PLATED UNLESS OTHERWISE SPECIFIED. 000 00 (WC) 0 WELDED 1.25 CARRIER .38 6.00 R Ζ Μ RADIUS * LENGTH 2.75 7.00 7.50 15.00 9.00 11.50 21 00 4.75 13.25 5.63 10.00 24.00 8.69 14.00 19.38 36.00 CONSULT FACTORY FOR SPECIAL RADIUS I Y** CATRAC LENGTH + 2 Α В Е X - 3.00 -STYLE С CARRIER OUTSIDE INSIDE OVERALL WIDTH MTG. MTG. 203 4.00 7.39 6.28 5.79 3.65 ★★ IF THE STATIONARY FOOT IS MOUNTED ON EITHER SIDE OF THE PIN X + 3.39 X + 2.28 X + 1.79 X - .35 Х CENTER LINE OF TRAVEL, THE DISTANCE (Y) BETWEEN CENTER LINE 203 7.39 6.28 6.29 3.65 4.00 AND STATIONARY FOOT MUST BE ADDED TO CATRAC LENGTH.



BOLTED

Х

X + 3.39 X + 2.28 X + 2.29

X - .35





CATRAC[®]

304 Dimensions







CENTER LINE OF TRAVEL, THE DISTANCE (Y) BETWEEN CENTER LINE AND STATIONARY FOOT MUST BE ADDED TO CATRAC LENGTH.

4.00

Х

8.11

6.31

X + 4.11 X + 2.31 X + 1.88 X - 1.68

5.88

2.32

3.78

X - .22

375

BOLTED

AMETEK



CATRAC[®] 456 Dimensions









AME









2

ЛМЕТЕК

Stationary Roller Part Number System



3



Retractable Roller Part Number System



*375 Style Consult Factory. Note: Approximate dimensions, not for construction unless certified. All dimensions in inches unless otherwise specified.

T = TOTAL TRAVEL UL = MAXIMUM UNSUPPORTED LENGTH





D Е F G



CATRAC[®] Carriage Support System

Carriage Support Systems

Carriage support systems are used when cable/hose loads and travel exceed the limits available with fixed roller supports and designed for applications requiring long travels, high speeds, quick accelerations and constant cycling. These systems are normally used in conjunction with 304 and 456 CATRAC styles. Special Mill-Duty carriage support systems are available for extreme environments. Some of the varieties available are shown on this page. Call our application engineers for more information at 800.325.8074.







CATRAC® Applications

CATRAC® Applications

Primary Metals

Tundish Cars Ladle Cars Torch Cut Off Machines Slab Markers Mud Gun Ladle Lance Pickling Line Strip Mills Furnaces "Dummy" Bar Continuous Annealing Lines

Construction Machinery

Manlifts Aerial Lifts Utility Trucks Underground Boring

Milling/Drilling Machinery Drilling Machines Offshore Drilling Platforms

Rolling Mill Machinery

Coil Processing Equipment Slitting Line Roll Grinders Walking Beam

Machine Tool & Specialty

Equipment Lathes **Milling Machines** Routers Shearing Stamping Loaders/Extractors Flame Cutters Automatic Vehicle Wash Gantry Crane Part Shuttles Press Feeders High-Pressure Water Washdown Equipment Stackers/Reclaimers X-Ray Gauges

Packaging/Material Handling

Palletizers Wrappers Shuttles Rubber Tired Vehicles Factory Automation Automation Storage & Retrieval System

Other

Pulp/Paper Industry Lumber Industry

CATRAC Automotive Applications

Stamping Related

Coil Handling Equipment Die Transfer Carts Shuttles In Die Transfer Equipment Stacker & Destacker Equipment Stamping Press Heads

Assembly Plants

Radiator Fluid Filling Lines Brake Fluid Filling Lines Body Transfer Lines Welding Lines Chassis Assembly Lines

Raw Material

Loading/Unloading Cranes Stacker/Reclaimer Cranes

Steel Making

Ladle Lance Ladle Transfer Cars Tundish Cars Starter Bar Torch Cut-Off Machine Run Out Table Soaking Pit Transfer Car Scarfing Machine

Hot/Cold Strip Mills

Walking Beam Reheat Surface Coil Buggies X-Ray Machines Slitter Machines Back Up Roll Sleds Pay Off Reel Coil Upender Entry/Exit Cars





Mining - Iron Ore - Coal -Limestone

Ore Beneficiation

Preparation Cleaning Belt Trippers Stackers Reclaimers Bedding Machines Trenchers

Shipping - Rail - Water - Raw Material Storage

Stackers Reclaimers Belt Trippers Car Dumpers

Integrated Steel Making Plants

Raw Material - Storage & Preparation

Stackers Reclaimers Belt Trippers Car Dumpers Trenchers

Sinter Plants

Belt Trippers Bedding Machine Trenching Machine Reclaimer

Coke Oven Batteries

Coal Preparation - Coke Storage Stackers

Reclaimers Belt Trippers Trenchers

Coke Battery Ovens - Coal Side

Lary Charge Cars Smoke Blow Pipe Cleaners Charge & Cover Machine Pushing Machine - Levelers

Coke Battery Ovens - Coke Side

Door Machine Smoke Suppressor Quench Cars Wharf Plows

Blast Furnaces

Taphole Drills Mud Guns Burden Distributor Car Sensing Lances

Steel Making Open Hearth

Charging Machine Ladle Transfer Cars Hot Metal (Molten Iron) Teeming Aisle (Molten Steel) Slag Pot Mold Preparation Vacuum & Dust Machine

Basic Oxygen Furnace (BOF)

Scrap Prep. Cutting Gantry Water Cooled Doors Removable Hood Section Belt Tripper - Flux Handling Refractory Gunning Machines Lance Carriage Horizontal Preheat Temperature Data Ladle Transfer Cars Hot Metal (Molten Iron) Teeming Aisle (Molten Steel) Slag Pot Argon Lance

Electric Furnace

Ladle Transfer Cars Furnace Tilt Teeming Aisle (Molten Steel) Cover Turn Charge Machines Argon Lance

Continuous Casting - Slab,

Steel Mill Applications

Boom, Billet Ladle Transfer Car Tundish Transfer Car Heat Shield Car Pouring Station Shroud Positioner Starting Bar Transfer Car Heat Shield Car Pouring Station Shroud Positioner Starter Bar Storage Rack Cut Off Machine Torch Machine **Cutoff Torch Traverse** Torch Edge Cutting Machine Upcut Shear Slab Sizing Mill - Roll Sleds Stamping Marking Machine Disappearing Stop Piler - Pusher

Slab, Blooming, Billet Mills - Shapers

Soaking Pit Transfer Cars Double Manipulator - Rolling Edge Guides Roll Sleds Scarfing Machine Supply Adjustable Heads Crop Shear Marking - Stamping Machine







Steel Mill Applications

Hot Strip Mills Primary Rolling

Roll Sleds, Backup and Work Roll Vertical Scale Breaker Horizontal Scale Breaker Roughing Mills Finishing Mills Descale Systems Morgoil Lubrications Coilers Mandrel Carriage Stripper Cars X-Ray Machines **Finishing - Processing** Transfer Cars **Oil Buggies** Combo Line Skin Pass Line Slitters & Shears Coil Carrier Hook Walking Beam Coil Transfer **Auxiliaries** Transfer Cars Work Rolls Backup Rolls Bearing Extractor Car

Sheet Mills - Cold Rolling

Continuous Pickling Line Entry Coil Cars - Buggies Welders Tension Wheels - Exit Coil Cars Mandrel Carriages - Coilers **Belt Wrappers** Oilers Pay Off Reels Upender/Downender Tandem Cold Rolling Mills **Coil Transfer Cars** Entry Horn Car Quick Work Roll Change Car Backup Roll Sled Work Roll Turntable Sled Belt Wrapper Transfer Lift & Turn Coil Transfer Temper Mill - Single Stand - Duo Mill Coil Prep & Transfer Entry Coil Car Quick Work Roll Change Car Exit Transfer Car **Back Uproll Sleds** Auxiliary Cold Mill Equipment Dechocking Car - Roll Shop Lathes & Grinders - Roll Shop Slitter & Shear Process Lines Entry & Exit Coil Cars **Recoil Mandrel Carriage** Pavoff Reels Belt Wrapper Transfer Coil Band & Strapping Upender/Downender **Continuous Anneal Lines** Exit & Entry Coil Cars X-Ray Machines Tension Reel Mandrel Carriages Coating & Plating Lines - Tin - AI - Chrome - Zinc Galvanize Vertical Spangle Unit Horizontal Steam Supply Zinc Hot Metal Pot Welding Machine Corrugating Lines Upender/Downender

Plate Mills

Roll Change Sleds Morgoil & Lube Systems X-Ray Gauge Descale Piping Side Shear & Edge Gauge End Gauge Leveler

Structural Mills - Rail Mills

Rolling Mill Sleds End Shear Straightener

Bar and Rod Mills

Roll Sleds End Shears Straightener Coiler Mandrel Carriage

Seamless and Butt Weld Pipe Mills

End Piercing Machine Billet Charging Machine

Roll Shops

Grinders Lathes Chock Extractors Roll Transfer Cars

Auxiliary Process Lines Tension Leveling Degreasing Paint Coating Shear Shot Blast Cut to Length **Slitting Line Continuous Paint Line** Galvanize Line **Edge Trim Line Grind & Polish** Anneal Embossing Side Trim **Chrome - TFS Tin Line**



CATRAC® MD for the Primary Metals Industry

This industry readily accepts only those products that are made exceptionally strong to the point of being "overbuilt". If the product doesn't look like it belongs in that environment, it doesn't.

Reliability is the Foremost Requirement

This industry knows no product that they can't destroy regularly, our mill-duty CATRACs are designed to be the most rugged assemblies available.

CATRAC is Stronger

All steel construction fabricated from 80,000 lb. tensile steel links, assembled with 9/16, 3/4 or 1" hardened shoulder bolts and locknuts, welded box beam carriers absorb side thrust loads, can be made to travel and span the longest distances in the industry.

Cable & Hose Replacement is Easy

The box beam carrier has free space that allows the bad cable or hose to be easily snaked out. The carrier bars can have spring loaded retaining rods, allowing the whole bundle of hoses to be removed and replaced at once.

CATRAC is Field Repairable

Because the CATRAC is all steel, it can be straightened or welded in position. It can be easily unbolted to replace carriers and links.

CATRAC Value

The competitively priced CATRAC offers more options for your dollar. Since 1967, CATRAC brand carriers have been solving customer problems. These years of experience have supplied us with an opportunity to provide solutions for numerous applications. This data allows us to incorporate new and better features into all CATRAC styles.



Available in Any and ALL Sizes

Made to any width or radius with more hose and cable carrying capacity in a box beam carrier, it can handle 8" I.D. hose or 12" O.D. cable. We also offer multiple widths and double deck carrier assemblies.

Retrofit into Present Track Systems

CATRAC is the only known track that can be easily and regularly made to retrofit into competitors original applications. We need only four dimensions to build CATRAC:

Track Height - "M" Track Height - "B" Track Height - "TL" Hose & Cable Clearance - "HC"

We'll deliver a stronger system quicker, and at a minimum cost.







CATRAC® Options

Chip Covers

Stainless steel chip covers protect hoses against damage from hot metal chips. The chip covers fit over the full length of the CATRAC[®] assembly, on either the top or bottom or both sides for maximum protection. The ends of the chip covers extend six inches beyond the ends of the CATRAC assembly for attachment. Chip covers should be fastened on either end to allow them to roll with the CATRAC. When ordering, specify either outside or inside covers or both.



Heavy Duty Mounting Feet

Heavy Duty horizontal and vertical mounting feet are made from 3/16" or 1/4" plate steel and provide the ultimate in strength at the mounting point. Typical applications include mill duty equipment and high speed applications. Custom designs are also available upon request.

Glide Bars and Transfer Bar for Side Mounted Applications

We offer a wide range of options for side mounted applications including Nylatron glide bars, round pads and steel or stainless steel ball casters. We can side mount virtually any style of CATRAC. Dual radius CATRACS are also available for rotary applications.

ons for side mounted on glide bars, round pads



Transfer Balls Alternated for Stability

Multiple Carrier Widths

All styles of 3 Pin Center Pivot CATRAC are available in multiple widths. This type of construction provides additional strength in wide systems. When width is a problem double decking of compartments is also available.



